

## RT8518A DC-Link Film Capacitor



### ► Features

Low ESR , high ripple current handling capabilities  
Low LS , self-healing property, long lifetime

### ► Application

It is widely used in DC-Link circuit as filter and energy storage  
Can replace electrolytic capacitor, better performance and longer life  
Wind power、 photovoltaic inverters、 various converters、 electric and hybrid car、 SVG、 welding machines、 power equipment

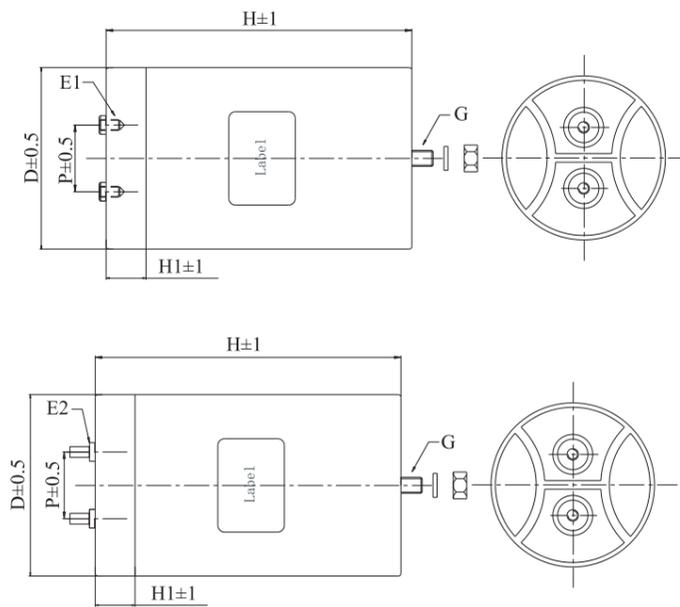
### ► Technical data

■ Capacitance range	20 $\mu$ F ~ 6000 $\mu$ F	■ Overvoltage (The longest duration/day) (30% of on-load-dur) 1.15 $U_N$ : 30min/day 1.2 $U_N$ : 5min/day 1.3 $U_N$ : 1min/day 1.5 $U_N$ : 30ms every time ,1000times during the life of the capacitor
■ Rated Voltage	450 V <sub>dc</sub> ~4000 V <sub>dc</sub>	
■ Capacitance Tolerance	J:±5% , K:±10%	
■ Dissipation factor tg $\delta$	≤0.002(25 °C, 100 Hz)	
■ Operating temperature range	-40 °C ~ 85 °C	■ Max torque of electrode M6 : 5 N.m M8 : 6 N.m
■ Storage temperature range	-40 °C ~ 105 °C	■ Max torque of installation 12 N.m
■ Voltage Endurance Between Terminals: 1.5 $U_N$ (10 s) Terminals to Case : $\sqrt{2}$ $U_N$ +1000 V (10 s)		■ Humidity 95 % (T <sub>test</sub> =56 days)
		■ Maximum Altitude 2000 m
■ Installation	Threaded bolt M12	■ Lifetime Expectancy 100 000 h @ $U_N$ ; $\theta_{hotspot}$ ≤ 70 °C

### ► Part number system

Model code					Voltage type	Number of phases	Rated voltage			Nominal capacity			Capacitance Tolerance	Lead out mode	Lead pitch	Terminal type
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
R	T	8	5	1	8	A	1	1	2	4	7	7	J	3	4	2
Number 1~5 Model code																
Number 6 Voltage type					8=DC											
Number 7 Number of phases					A=One-phase C=Three-phase											
Number 8~10 Rated voltage					e.g., 112=11×10 <sup>2</sup> V=1100 V, 451=45×10 <sup>1</sup> V=450 V											
Number 11~13 Nominal capacity					e.g., 477=47×10 <sup>7</sup> pF=47×10 <sup>4</sup> nF=470 $\mu$ F											
Number 14 Capacitance Tolerance					J=±5% , K=±10% , M=±20%											
Number 15 Lead out mode					3= Bolt type 4=Screw hole type											
Number 16 Lead pitch					4=32 mm 7=45 mm 6=50 mm											
Number 17 Terminal type					2=M6 3=M8											

► The contour map



► Measurement

ΦD(mm)	P(mm)	H1(mm)	G	E1	E2
76	32	20	M12X16	M6X10	M6X20
86	32	20	M12X16	M6X10	M6X20
86	32	25	M12X16	M6X10	M6X20
96	45	20	M12X16	M6X10	M6X20
116	45	30	M12X16	M8X10	M8X20
116	50	22	M12X16	M8X10	M8X20
136	50	30	M12X16	M8X10	M8X20

► The contour map

U <sub>N</sub>	C <sub>N</sub> (μF)	ΦD (mm)	H (mm)	ESR @1kHz (mΩ)	L <sub>S</sub> (nH)	I <sub>max</sub> (A) (60°C)	Part number
450 VDC	380	76	75	2.2	50	45	RT8518A451387
	500	76	100	1.5	40	65	RT8518A451507
	500	86	75	1.8	50	55	RT8518A451507
	650	86	95	1.2	40	75	RT8518A451657
	650	86	100	1.2	40	75	RT8518A451657
	650	96	75	1.5	50	60	RT8518A451657
	750	76	130	1.6	50	65	RT8518A451757
	1000	86	130	1.5	50	70	RT8518A451108
600 VDC	480	76	95	1.5	45	55	RT8518A601487
	650	76	120	1.9	50	53	RT8518A601657
	650	86	95	1.2	45	64	RT8518A601657
	780	76	140	2.2	55	50	RT8518A601787
	820	76	155	1.5	40	62	RT8518A601827
	880	86	120	1.5	50	60	RT8518A601887
	900	100	95	1.3	45	58	RT8518A601907
	950	76	174	1.5	45	63	RT8518A601957
	1000	86	136	1.8	55	55	RT8518A601108
	1100	86	140	1.7	55	57	RT8518A601118
	1100	86	155	1.4	40	64	RT8518A601118
	1200	100	120	1.4	50	58	RT8518A601128
	1200	116	95	0.7	45	80	RT8518A601128
	1300	86	174	1.4	45	64	RT8518A601138
	1400	100	136	1.5	55	58	RT8518A601148
	1500	100	140	1.6	55	58	RT8518A601158
	1600	100	155	1.0	40	70	RT8518A601168
	1600	116	120	1.0	50	70	RT8518A601168
	1800	100	174	1.0	45	70	RT8518A601188
	2000	86	252	1.1	55	70	RT8518A601208
2000	116	140	1.1	55	67	RT8518A601208	
2100	116	158	0.8	40	92	RT8518A601218	
2400	116	174	0.9	45	90	RT8518A601248	
3000	116	230	0.8	50	100	RT8518A601308	
5600	136	295	0.8	60	100	RT8518A601568	
700 VDC	360	76	95	1.8	70	55	RT8518A701367
	450	76	125	2.1	70	60	RT8518A701457
	480	86	95	1.5	65	60	RT8518A701487
	550	76	145	2.4	70	50	RT8518A701557

U <sub>N</sub>	C <sub>N</sub> (μF)	ΦD (mm)	H (mm)	ESR @1kHz (mΩ)	L <sub>s</sub> (nH)	I <sub>max</sub> (A) (60°C)	Part number
700 VDC	600	86	125	1.8	60	50	RT8518A701607
	650	76	175	2.0	65	55	RT8518A701657
	700	86	145	1.9	60	60	RT8518A701707
	900	86	175	1.7	60	60	RT8518A701907
	1100	116	125	1.4	55	70	RT8518A701118
	1400	116	145	1.2	60	75	RT8518A701148
	1700	116	175	1.3	60	75	RT8518A701178
	2200	136	145	0.9	60	80	RT8518A701228
	2800	136	175	1.1	60	80	RT8518A701288
900 VDC	260	76	95	2.8	70	47	RT8518A901267
	360	86	125	2.4	70	45	RT8518A901367
	380	76	95	2.8	65	55	RT8518A901387
	450	76	145	3.2	70	43	RT8518A901457
	500	86	125	3.2	60	50	RT8518A901507
	600	86	175	2.6	60	49	RT8518A901607
	750	86	145	2.2	60	60	RT8518A901757
	1000	116	175	1.8	55	65	RT8518A901108
	1100	116	125	1.6	50	65	RT8518A901118
	1400	136	145	2.0	55	80	RT8518A901148
	1500	116	175	2.4	55	80	RT8518A901158
	1700	136	145	1.8	55	85	RT8518A901178
2100	136	175	2.1	55	85	RT8518A901218	
1100 VDC	180	76	95	2.0	80	42	RT8518A112187
	220	86	95	2.2	60	45	RT8518A112227
	240	76	125	2.4	70	45	RT8518A112247
	300	76	145	2.9	70	42	RT8518A112307
	330	86	125	3.1	70	40	RT8518A112337
	360	76	175	3.3	75	55	RT8518A112367
	420	86	145	2.2	60	54	RT8518A112427
	500	86	175	1.6	60	59	RT8518A112507
	650	116	125	1.6	55	58	RT8518A112657
	750	116	145	1.5	60	59	RT8518A112757
	900	136	125	1.3	60	70	RT8518A112907
	940	116	175	1.2	55	70	RT8518A112947
	1000	136	145	1.1	60	75	RT8518A112108
	1400	136	175	0.9	70	80	RT8518A112148
1300 VDC	120	76	95	2.9	75	39	RT8518A132127

U <sub>N</sub>	C <sub>N</sub> (μF)	ΦD (mm)	H (mm)	ESR @1kHz (mΩ)	L <sub>s</sub> (nH)	I <sub>max</sub> (A) (60°C)	Part number
1300 VDC	160	76	125	3.7	70	37	RT8518A132167
	170	86	95	3.7	70	37	RT8518A132177
	210	76	145	4.1	70	36	RT8518A132217
	230	86	125	2.3	60	52	RT8518A132237
	240	76	175	2.3	60	50	RT8518A132247
	270	86	145	3.3	65	44	RT8518A132277
	320	86	175	1.9	55	55	RT8518A132327
	430	116	125	1.6	60	55	RT8518A132437
	520	116	145	1.8	60	53	RT8518A132527
	630	116	175	1.2	60	60	RT8518A132637
	660	136	125	1.7	50	70	RT8518A132667
	750	136	145	1.7	60	80	RT8518A132757
	900	136	175	1.4	60	80	RT8518A132907
	1500 VDC	90	76	95	3.1	80	35
120		76	125	3.8	70	40	RT8518A152127
130		86	95	2.8	60	38	RT8518A152137
150		76	145	4.2	75	40	RT8518A152157
170		76	175	4.8	85	45	RT8518A152177
200		86	145	3.6	60	50	RT8518A152207
230		116	95	2.4	60	60	RT8518A152237
240		86	175	4.5	60	55	RT8518A152247
320		116	125	2.4	60	65	RT8518A152327
390		116	145	2.6	60	70	RT8518A152397
1800 VDC	470	116	175	3.1	60	70	RT8518A152477
	130	86	125	5	55	17.1	RT8518A182137
	120	86	130	2.5	55	5.4	RT8518A182127
	180	86	180	2	60	8.1	RT8518A182187
	260	86	230	3	60	9.4	RT8518A182267
	130	116	130	2	60	8.3	RT8518A182137
	360	116	180	3.2	65	10.8	RT8518A182367
	500	116	230	3	70	15.0	RT8518A182507
	510	136	180	2	70	10.7	RT8518A182517
	680	136	230	2	70	14.3	RT8518A182687
2000 VDC	50	76	95	4.8	80	30	RT8518A202506
	60	86	95	4.1	60	30	RT8518A202606
	70	76	125	6.5	80	30	RT8518A202706
	100	86	125	6.8	60	35	RT8518A202107

$U_N$	$C_N$ ( $\mu F$ )	$\Phi D$ (mm)	H (mm)	ESR @1kHz (m $\Omega$ )	$L_S$ (nH)	$I_{max}$ (A) (60°C)	Part number
2000 VDC	150	86	175	8.5	80	40	RT8518A202157
	190	116	125	3.2	60	60	RT8518A202197
	220	116	145	3.5	60	60	RT8518A202227
	270	136	125	3.4	60	60	RT8518A202277
	300	116	175	4.2	60	60	RT8518A202307
2200 VDC	90	86	140	3.7	65	34	RT8518A222906
	140	116	120	2.2	60	50	RT8518A222147
	150	86	225	1.9	60	57	RT8518A222157
	170	116	140	2.5	65	49	RT8518A222177
	200	136	120	1.9	60	54	RT8518A222207
	210	116	174	1.1	55	77	RT8518A222217
	250	136	140	2.1	65	53	RT8518A222257
	290	116	225	1.4	60	77	RT8518A222297
	290	136	175	1.0	55	79	RT8518A222297
	400	136	225	1.2	60	79	RT8518A222407
500	136	265	1.4	60	79	RT8518A222507	
3200 VDC	40	86	140	4.9	65	30	RT8518A322406
	64	116	120	2.7	60	45	RT8518A322646
	65	86	225	2.4	60	50	RT8518A322656
	78	116	140	3.1	65	52	RT8518A322786
	90	136	120	2.2	60	49	RT8518A322906
	92	116	174	1.3	55	70	RT8518A322926
	110	136	140	2.5	65	47	RT8518A322117
	120	116	225	1.7	60	68	RT8518A322127
	120	136	175	1.2	55	71	RT8518A322127
	180	136	225	1.4	60	72	RT8518A322187
220	136	265	1.6	60	72	RT8518A322227	
4000 VDC	24	86	140	4.2	65	32	RT8518A402246
	38	86	225	2.1	60	62	RT8518A402386
	37	116	120	2.4	60	47	RT8518A402376
	46	116	140	2.8	65	46	RT8518A402466
	74	116	225	1.5	60	72	RT8518A402746
	92	116	265	1.7	60	70	RT8518A402926
	52	136	120	2.1	60	50	RT8518A402526
	64	136	140	2.3	65	49	RT8518A402646
	100	136	225	1.3	60	73	RT8518A402107
130	136	265	1.5	60	37	RT8518A402137	